RINGKASAN

Perkembangan budidaya sayuran terutama wortel secara hidroponik di Indonesia masih sangat minim, hal ini disebabkan karena kurangnya penyuluhan tentang kelebihan sistem hidroponik pada lahan sempit. Penelitian ini bertujuan untuk (1) Mendapatkan media tanam yang terbaik untuk budidaya wortel hidroponik di dataran rendah, (2) Mendapatkan konsentrasi pupuk AB Mix yang optimal untuk pertumbuhan wortel hidroponik di dataran rendah dan (3) Mengetahui interaksi antara media tanam dan konsentrasi pupuk AB Mix untuk pertumbuhan dan hasil tanaman wortel dengan sistem hidroponik di dataran rendah.

Penelitian ini dilaksanakan pada bulan Maret 2018 sampai dengan Agustus 2018 di Desa Purwosari, Kecamatan Baturaden, Kabupaten Banyumas. Metode penelitian yang digunakan adalah eksperimen yang disusun berdasarkan rancangan acak kelompok lengkap (RAKL) dengan 3 faktor dan 5 blok. Perlakuan yang telah dilakukan adalah macam media tanam : M1 = arang sekam, M2 = cacahan pakis dan M3 = pasir. Konsentrasi pupuk AB Mix terdiri atas tiga taraf yaitu : K1 = 25 ppm, K2 =50 ppm, K3 = 75 ppm. Variabel yang diamati meliputi tinggi tanaman, jumlah daun, diameter umbi, panjang umbi, volume umbi, bobot umbi, bobot tanaman segar dan bobot tanaman kering.

Hasil penelitian menjukan bahawa media tanam terbaik untuk budidaya wortel hidroponik didataran rendah yaitu arang sekam dengan bobot umbi sebesar 135,8 g. Pemberian konsentrasi AB Mix optimal untuk wortel hidroponik didataran rendah yaitu 75 ppm dengan hasil sebesar 111,3 g. Terdapat interaksi anatara penggunaan media tanam arang sekam dan pemberian konsentrasi AB Mix 75 ppm pada variabel bobot umbi dengan bobot yang didapat sebesar 242 g.

SUMMARY

The development of vegetable cultivation, especially carrots hydroponically in Indonesia is still very minimal, this is due to the lack of counseling about the advantages of hydroponic systems on narrow land. This study aims to (1) Obtain the best planting media for hydroponic carrot cultivation in the lowlands, (2) Obtain optimal AB Mix fertilizer concentration for the growth of hydroponic carrots in the lowlands and (3) Determine the interaction between planting media and nutrient concentration AB Mix for growth and yield of carrot plants with hydroponic systems in the lowlands.

This research was be held in March 2018 to August 2018 in Purwosari Village, Baturaden District, Banyumas Regency. The research method used is an experiment compiled based on a completely randomized block design. The treatment that will be tried is a variety of planting media: M1 = husk charcoal, M2 = fern count and M3 = sand. AB Mix nutrient concentration consists of three levels, namely: K1 = 25 ppm, K2 = 50 ppm, K3 = 75 ppm. Treatment was repeated 5 (five) times, so that there were 60 treatments. Variables observed included plant height, number of leaves, tuber diameter, tuber length, tuber volume, tuber weight, plant wet weight and plant dry weight.

The results showed that the best planting medium for the cultivation of lowland hydroponic carrots was husk charcoal with tuber weight of 135.86 g. The optimal concentration of AB Mix for hydroponic carrots in the lowlands was 75 ppm with a yield of 111, 3 g. There was an interaction between the use of husk charcoal growing media and the administration of AB Mix concentration of 75 ppm on the tuber weight variable with a weight obtained of 242 g.